

A Snapshot of the Australian Electricity Generation Industry

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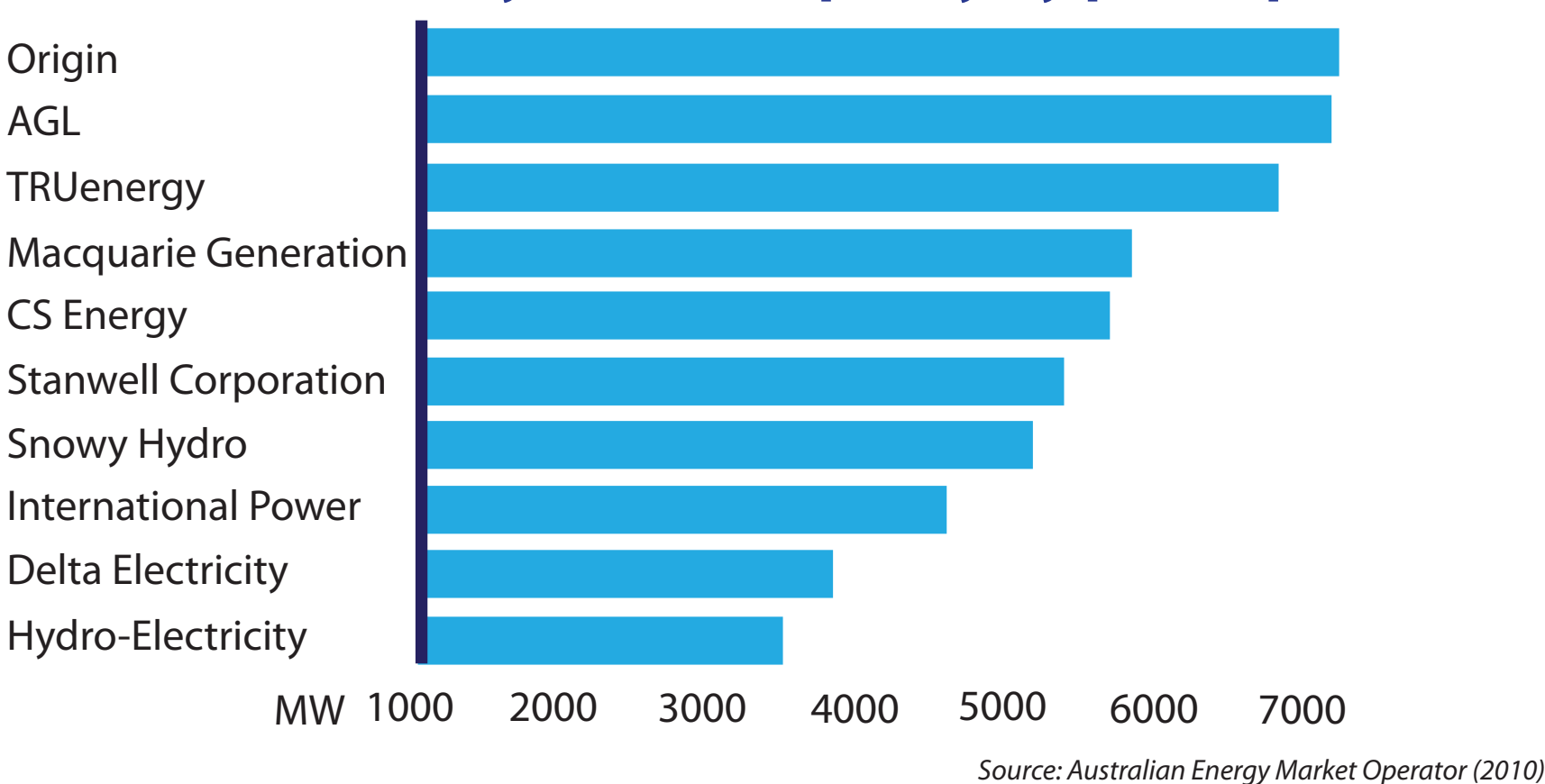
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PhD Research Topic: A Snapshot of the Australian Electricity Generation Industry

OVERVIEW

Electricity is the most convenient form of energy and can be more easily distributed than other type of energy (Australian Energy Market Operator, 2010). The electricity generation industry is one of the largest industries in the country and includes generators, transmission and distribution networks (Australian Bureau of Agricultural and Resource, 2011). Today, the supply chain of electricity begins with generation in electricity stations.

National electricity market capacity by participant



This study consists of a comparison of the supply chains of three energy companies; namely CS Energy, SNOWY, and AGL. The objective of this research is to:

- (1) provide a comprehensive snapshot analysis of the Australian electricity generation industry,
- (2) describe how the electricity supply chain is regulated in Australia and how regulation affects supply chain behaviours,
- (3) investigate new carbon tax rules and how they will affect generation companies,
- (4) undertake a detailed analysis of supply chains in the electricity generation industry, and finally
- (5) undertake a case study of three electricity generation companies currently operating within Australia.

The specific focus of this study is to determine whether efficient supply chains help contribute to competitive advantage within the context of the Australian electricity generation industry.

METHOD

The study utilizes a case study methodology in order to identify, measure, and value the role of procurement, strategic alliances, competitiveness, and the application of regulatory arrangements to a panel of electricity generation companies within Australia.

This research will develop a technique for measuring the efficiency of each supply chain as well as determining how the new carbon tax regime will affect existing supply chains. The three companies focused upon within the context of this study have similar market capitalizations and revenues, but employ very different production technologies.



A case study methodology was chosen for this study as it was felt that the specific research questions proposed by the researcher could best be answered by a more in-depth view of supply chains, which would best be gained by a more detailed approach focusing on a fewer number of companies. Three diverse case studies, comprising a coal-fired electricity producer supply chain, a gas-fired electricity producer supply chain, and a hydro-electricity producer supply chain, will be analyzed, mapped and compared in detail.

A case study has been defined as a detailed and intensive study of a specific social unit (Yin, 2011). Case studies are capable of incorporating quantitative as well as qualitative research analysis, although in this research qualitative data analysis will be the focus.

The following definition has been used for the Australian electricity generation industry:

Firms in this industry generate electricity from a variety of energy sources ... the electricity generated is transported to end users by electricity transmission and distribution systems. (Market Research, 2011).

KEY REFERENCES

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